

IN THE CLAIMS:

Please cancel claims 1-7, 12 and 19 and amend the remaining claims as follows:

1-7. (Canceled).

8. (Currently Amended) A method of allocating resources among competing demands in a linear programming production planning system, said method comprising:

- classifying said demands into fair share sets, wherein all demands within each fair share set have the same priority;
- calculating the cumulative demand for each resource within each fair share set;
- and
- allocating said resources to said fair share sets in order of fair share set priority, wherein, if during said allocating process the supply of a given resource cannot satisfy a given cumulative demand of a given fair share set, said given resource is allocated proportionally among all demands that contribute to said given cumulative demand within said given fair share set[[.]] , and
- wherein said allocating process encourages proportional sharing by imposing penalties for non-proportional sharing.

9. (Currently Amended) The method in claim 8, all the limitations of which are incorporated herein by reference, wherein said process of calculating cumulative demand is time period dependent.

10. (Currently Amended) The method in claim 8, all the limitations of which are incorporated herein by reference, wherein said classifying process considers demand family hierarchy relationships.

11. (Currently Amended) The method in claim 8, all the limitations of which are incorporated herein by reference, wherein said allocating process comprises a linear program that simultaneously allocates multiple resources to multiple demands.

12. (Canceled).

13. (Currently Amended) The method in claim 8, all the limitations of which are incorporated herein by reference, wherein said fair share sets identify parts, priority level, locations, and timing information.

14. (Currently Amended) The method in claim [[1]] 8, all the limitations of which are incorporated herein by reference, wherein during said allocating process, higher priority fair share sets are fully satisfied with a resource before lower priority fair share sets receive any of said resource.

15. (Currently Amended) A program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform a method of allocating resources among competing demands in a linear programming production planning system, said method comprising:

classifying said demands into fair share sets, wherein all demands within each fair share set have the same priority;

calculating the cumulative demand for each resource within each fair share set;
and

allocating said resources to said fair share sets in order of fair share set priority,
wherein, if during said allocating process the supply of a given resource cannot satisfy a given cumulative demand of a given fair share set, said given resource is allocated proportionally among all demands that contribute to said given cumulative demand within said given fair share set[.], and

wherein said allocating process encourages proportional sharing by imposing penalties for non-proportional sharing.

16. (Currently Amended) The program storage device in claim 15, all the limitations of which are incorporated herein by reference, wherein said process of calculating cumulative demand is time period dependent.

17. (Currently Amended) The program storage device in claim 15, all the limitations of which are incorporated herein by reference, wherein said classifying process considers demand family hierarchy relationships.

18. (Currently Amended) The program storage device in claim 15, all the limitations of which are incorporated herein by reference, wherein said allocating process comprises a linear program that simultaneously allocates multiple resources to multiple demands.

19. (Canceled).

20. (Currently Amended) The program storage device in claim 15, all the limitations of which are incorporated herein by reference, wherein said fair share sets identify parts, priority level, locations, and timing information.